Preliminary DRAFT Cedar River Tributaries Chinook Population - Tier 2 - Initial Habitat Project List

Includes Potential Restoration and Protection Projects by Reach.

Rock Creek Reaches 1-5,6-14

Reach 1: Rock Creek from mouth to foot bridge over creek (RM 0.06).

Restoration

Technical Hypothesis: *Reduce channel confinement, remove bank hardening in Reach 1; restore seasonal low flows, add LWD, restore riparian vegetation to increase pools.*

Project #	Reach #	Reach Restor. Benefit Rank	NTAA #	NTAA Name & Description	Fits w/Tech. Hypoth. (Y/N)	Approx. Cost	Notes, Key Uncertainties	Benefits to Chinook H, M. L	Feasib. H, M, L
C341	1	1 of 6	new	**Floodplain Restoration Near Mouth:** Buyout house on right bank, remove bank hardening, add LWD and restore riparian vegetation (remove non-native plants and replant with native vegetation).	Y			**H/M**	**H/M**
C342	1	1 of 6	new	**Study Feasibility of Increasing Off-channel Habitat in Reach 1:** Study whether or not it is feasible to increase off-channel habitat in Reach 1 without harming existing wetland, hydrology in creek. Re-examine connecting wetland on left side of lower Rock Creek to the creek to increase off-channel habitat.	Y		Left bank in reach is steeper. Will be less feasible to increase off-channel habitat on left side. There is high quality riparian habitat in reach now. Should avoid harming it. Concern project to connect left bank wetland in Reach 1 could de-water mouth of Rock Creek; need to study how project would affect the hydrology of the wetland and Rock Creek. If done, benefit would be for juvenile rearing.	**?**	**H**
C343	1	1 of 6	new	**Fish Access at Mouth:** Explore improving fish passage at the mouth of Rock Creek.	Y		Might be able to be done with LWD installation. Concern expressed about engineered solution. Need .8 feet of depth, so may not be feasible to achieve that depth.	**H**	**M/L**

Protection

Technical Hypothesis: *Protect seasonal flows, forest cover, riparian cover, pools, LWD and channel connectivity.*

Project #	Reach #	Reach Prot. Benefit Rank	Existing Prot. Priority (Y/N)	NTAA #	NTAA Name & Description	Fits w/Tech. Hypoth. (Y/N)	Approx. Cost	Notes, Key Uncertainties	Benefits to Chinook H, M. L	Feasib. H, M, L
	1	1			No projects identified at this time.					

Reach 2: Rock Creek from foot bridge at RM 0.06 to box culvert under SE 248th St (@ RM 0.15)

Restoration

Technical Hypothesis: *Restore seasonal low flows, add LWD, restore riparian vegetation to increase pools.*

Project #	Reach #	Reach Restor. Benefit Rank	NTAA #	NTAA Name & Description	Fits w/Tech. Hypoth. (Y/N)	Approx. Cost	Notes, Key Uncertainties	Benefits to Chinook H, M. L	Feasib. H, M, L
C344	2	2 of 6	new	**Remove Bank Hardening:** Remove bank hardening on right bank in Reach 2.	Y		There are houses on right bank in reach.	**H/M**	**L**
C345	2	2 of 6	new	**Study Feasibility of Increasing Off-Channel Habitat:** Study whether or not is feasible to increase off-channel habitat in Reach 2 without harming existing wetland, hydrology in creek.	Y		Left bank in reach is steeper. Will be less feasible to increase off-channel habitat on left side. There is high quality riparian habitat in reach now. Should avoid harming it. Feasibility to do study is high, less so to do project.	**?**	**H**

Protection

Technical Hypothesis: *Protect seasonal flows, forest cover, riparian cover, pools, LWD and channel connectivity.*

Project #	Reach #	Reach Prot. Benefit Rank	Existing Prot. Priority (Y/N)	NTAA #	NTAA Name & Description	Fits w/Tech. Hypoth. (Y/N)	Approx. Cost	Notes, Key Uncertainties	Benefits to Chinook H, M. L	Feasib. H, M, L
	2				No projects identified at this time.					

Reach 3: Rock Creek from SE 248th St Culvert (RM 0.15) to culvert under Cedar River Pipeline (RM 0.27)

Restoration

Technical Hypothesis: *Restore seasonal low flows, add LWD, restore riparian vegetation to increase pools.*

Project #	Reach #	Reach Restor. Benefit Rank	NTAA #	NTAA Name & Description	Fits w/Tech. Hypoth. (Y/N)	Approx. Cost	Notes, Key Uncertainties	Benefits to Chinook H, M. L	Feasib. H, M, L
C346	3	4 of 6 (tied with 4B)	new	**Improve Fish Passage Under Cedar River Pipeline:** Evaluate whether or not culvert under Cedar River pipeline is a partial barrier to fish passage and if found to be a problem, implement improvements.	Y		City owns the land upstream. Study being done by City of Seattle to evaluate the culvert under the Cedar River Pipeline and recommend alternative solutions if found to be a barrier to fish passage.	**H/M**	**H**
C347	3	4 of 6 (tied with 4B)	new	**Restore Riparian Vegetation:** Many large conifers lost in Reach 3 in 2004 windstorm. Replant conifers. Control invasive plant species.	Y		Landowner willingness uncertain. Should consult with forester to determine need for planting versus relying on existing young trees or natural seeding from remaining trees. There is a lot of LWD in Reach 3.	**H**	**H**

Protection

Technical Hypothesis: *Protect seasonal flows, forest cover, riparian cover, pools, LWD and channel connectivity.*

Project #	Reach #	Reach Prot. Benefit Rank	Existing Prot. Priority (Y/N)	NTAA #	NTAA Name & Description	Fits w/Tech. Hypoth. (Y/N)	Approx. Cost	Notes, Key Uncertainties	Benefits to Chinook H, M, L	Feasib. H, M, L
	3	2			No projects identified at this time.					

Reach 4A: Rock Creek from culvert under Cedar River Pipeline (RM 0.27) to RM 0.32

Restoration

Technical Hypothesis: *Restore seasonal low flows, add LWD, restore riparian vegetation to increase pools.*

Project #	Reach #	Reach Restor. Benefit Rank	NTAA #	NTAA Name & Description	Fits w/Tech. Hypoth. (Y/N)	Approx. Cost	Notes, Key Uncertainties	Benefits to Chinook H, M, L	Feasib. H, M, L
	4A	3 of 6		No projects identified at this time.					

Protection

Technical Hypothesis: *Protect seasonal flows, forest cover, riparian cover, pools, LWD and channel connectivity.*

Project #	Reach #	Reach Prot. Benefit Rank	Existing Prot. Priority (Y/N)	NTAA #	NTAA Name & Description	Fits w/Tech. Hypoth. (Y/N)	Approx. Cost	Notes, Key Uncertainties	Benefits to Chinook H, M, L	Feasib. H, M, L
C348	4A	not ranked	Y	new	**Protect Rock Creek Natural Area:** Work with adjacent landowners to decrease encroachment into Rock Creek Natural Area and increase stewardship. Consider fencing Natural Area to reduce encroachment.	Y		Covers Reaches 4-8.	**M/L**	**M**

Reach 4B: Rock Creek from RM 0.32 to RM 0.43

Restoration

Technical Hypothesis: *Restore seasonal low flows, add LWD, restore riparian vegetation to increase pools.*

Project #	Reach #	Reach Restor. Benefit Rank	NTAA #	NTAA Name & Description	Fits w/Tech. Hypoth. (Y/N)	Approx. Cost	Notes, Key Uncertainties	Benefits to Chinook H, M, L	Feasib. H, M, L
	4B	4 of 6 (tied with 3)		No projects identified at this time.					

Protection

Technical Hypothesis: *Protect seasonal flows, forest cover, riparian cover, pools, LWD and channel connectivity.*

Project #	Reach #	Reach Prot. Benefit Rank	Existing Prot. Priority (Y/N)	NTAA #	NTAA Name & Description	Fits w/Tech. Hypoth. (Y/N)	Approx. Cost	Notes, Key Uncertainties	Benefits to Chinook H, M, L	Feasib. H, M, L
C349	4B	not ranked	Y	new	**Protect Rock Creek Natural Area:** Work with adjacent landowners to decrease encroachment into Rock Creek Natural Area and increase stewardship. Consider fencing Natural Area to reduce encroachment.	Y		Covers Reaches 4-8.	**M/L**	**M**

Reach 5: Rock Creek from RM 0.43 to RM 0.65 (upper extent Chinook)

Restoration

Technical Hypothesis: *Restore seasonal low flows, add LWD, restore riparian vegetation to increase pools.*

Project #	Reach #	Reach Restor. Benefit Rank	NTAA #	NTAA Name & Description	Fits w/Tech. Hypoth. (Y/N)	Approx. Cost	Notes, Key Uncertainties	Benefits to Chinook H, M. L	Feasib. H, M, L
	5	5 of 6		No projects identified at this time.					

Protection

Technical Hypothesis: *Protect seasonal flows, forest cover, riparian cover, pools, LWD and channel connectivity.*

Project #	Reach #	Reach Prot. Benefit Rank	Existing Prot. Priority (Y/N)	NTAA #	NTAA Name & Description	Fits w/Tech. Hypoth. (Y/N)	Approx. Cost	Notes, Key Uncertainties	Benefits to Chinook H, M. L	Feasib. H, M, L
C350	5	3	Y	new	**Protect Rock Creek Natural Area:** Work with adjacent landowners to decrease encroachment into Rock Creek Natural Area and increase stewardship. Consider fencing Natural Area to reduce encroachment.	Y		Covers Reaches 4-8.	**M/L**	**M**

Reach 6-14: Rock Creek from RM 0.65 to RM 4.8 (upper extent of coho potential)

Restoration

Technical Hypothesis: *Restore seasonal low flows, add LWD, restore riparian vegetation to increase pools.*

Project #	Reach #	Reach Restor. Benefit Rank	NTAA #	NTAA Name & Description	Fits w/Tech. Hypoth. (Y/N)	Approx. Cost	Notes, Key Uncertainties	Benefits to Chinook H, M. L	Feasib. H, M, L
C351	R6-14	not ranked	new	**Enhance Flows for Pre-Spawning Migrants:** Work with the City of Kent in establishing instream flows that are protective of Chinook through their HCP process.	Y		Kent HCP process is underway.	**H**	**H**

Protection

Technical Hypothesis: *Protect seasonal flows, forest cover, riparian cover, pools, LWD and channel connectivity.*

Project #	Reach #	Reach Prot. Benefit Rank	Existing Prot. Priority (Y/N)	NTAA #	NTAA Name & Description	Fits w/Tech. Hypoth. (Y/N)	Approx. Cost	Notes, Key Uncertainties	Benefits to Chinook H, M. L	Feasib. H, M, L
C352	R6-14	not ranked	Y	new	**Protect Rock Creek Natural Area:** Work with adjacent landowners to decrease encroachment into Rock Creek Natural Area and increase stewardship. Consider fencing Natural Area to reduce encroachment.	Y		Covers Reaches 4-8. Fish distribution map indicates that this is the upper extent of coho in Rock Creek. Concern expressed that this is based on anecdotal, historical information and that WDFW stream catalog shows coho distribution to stop just above C.	**M/L**	**M**